CLAIMS

1.   An ependymin-like protein derived from a mammal, or a salt thereof.

2.   A protein comprising an amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3, or a substantially equivalent thereto, or a salt thereof.

3.   . The protein according to claim 2, wherein the substantially equivalent amino acid sequence to the amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3 is an amino acid sequence comprising an amino acid sequence represented by SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 or SEQ ID NO:7.

4.   The protein according to claim 2, wherein the substantially equivalent amino acid sequence to the amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3 is an amino acid sequence having an identity of not less than about 95% to the amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3.

5.   The protein according to claim 2, wherein the substantially equivalent amino acid sequence to the amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3 is (i) an amino acid sequence wherein one or more amino acid residues are deleted from the amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3, (ii) an amino acid sequence wherein one or more amino acid residues are added to the amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3, (iii) an amino acid sequence wherein one or more amino acid residues in the amino acid sequence represented by SEQ ID NO:1, SEQ ID NO:2 or SEQ ID NO:3 are substituted with one or more amino acid residues, or (iv) a combination thereof.

6.   The protein according to claim 2, which has a

nerve-extending activity.

7. A partial peptide of the protein according to claim 1 or 2, or a salt thereof.

8. The partial peptide according to claim 7, which has an amino acid sequence represented by any one of SEQ ID NO:4 to SEQ ID NO:9.

9. A precursor protein of the protein according to claim 2 or a salt thereof, which comprising an amino acid sequence represented by SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 or SEQ ID NO:13, or a substantially equivalent thereto.

10. A signal peptide comprising an amino acid sequence represented by SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16 or SEQ ID NO:17, or a substantially equivalent thereto.

11. A DNA which comprises a DNA having a nucleotide sequence coding for the protein according to claim 1 or 2.

12. The DNA according to claim 11, which comprises a nucleotide sequence represented by SEQ ID NO:18, SEQ ID NO:19 or SEQ ID NO:20.

13. A DNA which comprises a DNA having a nucleotide sequence coding for the precursor protein according to claim 9.

14. The DNA according to claim 13, which comprises a nucleotide sequence represented by SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29 or SEQ ID NO:30.

15. A DNA which comprises a DNA having a nucleotide sequence coding for the signal peptide according to claim 10.

16. The DNA according to claim 15, which comprises a nucleotide sequence represented by SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33 or SEQ ID NO:34.

17. A recombinant vector comprising the DNA according to claim 11.

18. A transformant which is transformed with the recombinant vector according to claim 17.

19. A method for producing the protein according to claim 1 or 2 or a salt thereof, which comprises cultivating the transformant according to claim 18 under conditions suitable to express and accumulate the protein according to claim 1 or 2 or a salt thereof, and collecting the same.

20. A pharmaceutical composition which comprises the protein according to claim 1 or 2, the partial peptide according to claim 7, or a salt thereof.

21. The pharmaceutical composition according to claim 20, which is a therapeutic or prophylactic agent for Alzheimer's disease, Parkingson's disease, Huntington's disease, amyotrophic lateral sclerosis, dementia or cerebellar degeneration.

22. A pharmaceutical composition which comprises the DNA according to claim 11.

23. The pharmaceutical composition according to claim 22, which is a therapeutic or prophylactic agent for Alzheimer's disease, Parkingson's disease, Huntington's disease, amyotrophic lateral sclerosis, dementia or cerebellar degeneration.

24. An antibody against the protein according to claim 1 or 2, the partial peptide according to claim 7, the precursor protein according to claim 9, or a salt thereof.

25. A method for quantitative determination of the protein according to claim 1 or 2, the partial peptide according to claim 7, the precursor protein according to claim 9, or a salt thereof, which comprises contacting the antibody according to claim 24 with the protein according to claim 1 or 2, the partial peptide according to claim 7, the precursor protein according to claim 9, or a salt thereof.

26. A method for quantitative determination of the protein according to claim 1 or 2, the partial peptide according to claim 7, the precursor protein according

to claim 9, or a salt thereof in a test liquid sample, which comprises

(a) competitively reacting the test liquid sample and a labeled protein according to claim 1 or 2, the partial peptide according to claim 7, the precursor protein according to claim 9, or a salt thereof with the antibody according to claim 24, and

(b) measuring the ratio of the labeled protein according to claim 1 or 2, the partial peptide according to claim 7, the precursor protein according to claim 9, or a salt thereof which binds to the antibody.

27. A method for quantitative determination of the protein according to claim 1 or 2, the partial peptide according to claim 7, the precursor protein according to claim 9, or a salt thereof in a test liquid sample, which comprises

(a) reacting the test liquid sample with the antibody according to claim 24 immobilized on an insoluble carrier and another labeled antibody according to claim 24 simultaneously or continuously, and

(b) measuring the activity of labeling agent on the insoluble carrier.

28. A method for screening for a compound which promotes a function of the protein according to claim 1 or 2, the partial protein according to claim 7, or a salt thereof, which comprises measuring and comparing the function of the protein according to claim 1 or 2, the partial protein according to claim 7 or a salt thereof, in cases that (i) the protein according to claim 1 or 2, the partial protein according to claim 7 or a salt thereof is contacted with a nerve cell or a nerve tissue and (ii) the protein according to claim 1 or 2, the partial protein according to claim 7 or a salt thereof and a test compound are contacted with a nerve cell or a nerve tissue.

29. The method according to claim 28, wherein the function is (i) a nerve-extending activity in the central nerve system or a gliacyte stimulating activity or (ii) an activity of forming memories in brain.

30. The method according to claim 28, wherein the function is a nerve-extending activity.

31. A kit for screening for a compound which promotes a function of the protein according to claim 1 or 2, the partial protein according to claim 7 or a salt thereof, which comprises the protein according to claim 1 or 2, the partial peptide according to claim 7 or a salt thereof.

32. A compound, or a salt thereof, which promotes a function of the protein according to claim 1 or 2, the partial peptide according to claim 7 or a salt thereof, and which is obtained by the method for screening according to claim 28 or the kit for screening according to claim 31.

33. A pharmaceutical composition which comprises the compound, or a salt thereof, which promotes a function of the protein according to claim 1 or 2, the partial peptide according to claim 7 or a salt thereof, and which is obtained by the method for screening according to claim 28 or the kit for screening according to claim 31.

34. The pharmaceutical composition according to claim 33, which is a therapeutic or prophylactic agent for Alzheimer's disease, Parkingson's disease, Huntington's disease, amyotrophic lateral sclerosis, dementia or cerebellar degeneration.

35. A method for treating or preventing Alzheimer's disease, Parkingson's disease, Huntington's disease, amyotrophic lateral sclerosis, dementia or cerebellar degeneration in a mammal which comprises administering an effective amount of the protein according to claim 1 or 2, the partial peptide according to claim 7 or a

salt thereof to said mammal.

36. A method for treating or preventing Alzheimer's disease, Parkingson's disease, Huntington's disease, amyotrophic lateral sclerosis, dementia or cerebellar degeneration in a mammal which comprises administering an effective amount of the DNA according to claim 11 or a salt thereof to said mammal.

37. Use of the protein according to claim 1 or 2, the partial peptide according to claim 7 or a salt thereof for production of a therapeutic or prophylactic agent for Alzheimer's disease, Parkingson's disease, Huntington's disease, amyotrophic lateral sclerosis, dementia or cerebellar degeneration.

38. Use of the DNA according to claim 11 for production of a therapeutic or prophylactic agent for Alzheimer's disease, Parkingson's disease, Huntington's disease, amyotrophic lateral sclerosis, dementia or cerebellar degeneration.